No. 200400136

# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

TurfOne & Rutgers, The State Univ. of New Jersey

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE , OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

*FESCUE, TALL*

*'Blackwatch'*

*In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this twenty-ninth day of September, in the year two thousand and six.*

*Attest:*

*Commissioner*
*Plant Variety Protection Office*
*Agricultural Marketing Service*

*Secretary of Agriculture*

REPRODUCE LOCALLY. *Include form number and date on all reproductions*

Form Approved - OMB No. 0581-0055

**U.S. DEPARTMENT OF AGRICULTURE**
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

**APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE**
*(Instructions and information collection burden statement on reverse)*

*The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.*

*Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).*

1. NAME OF OWNER
TurfOne & Rutgers, The State Univ. of New Jersey

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME
Pick OB3-01
OB3-1 (on: 3/24/2006)

3. VARIETY NAME
Blackwatch

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
30190 Hwy 34 SW
Albany, OR 97321

Cook College
88 Lipman Dr.
New Brunswick, NJ 08901-8525

5. TELEPHONE *(include area code)*
541-967-0123

6. FAX *(include area code)*
541-967-6103

**FOR OFFICIAL USE ONLY**

PVPO NUMBER
200400136

FILING DATE
3/11/2004

7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)*
Corp. & Public Univ.

8. IF INCORPORATED, GIVE STATE OF INCORPORATION
Oregon

9. DATE OF INCORPORATION
1968

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. *(First person listed will receive all papers)*

Donald J. Floyd
TurfOne
30190 Hwy 34 SW
Albany, OR 97321

FEES RECEIVED

FILING AND EXAMINATION FEES:
$ 3,652.00
DATE 3/11/2004

CERTIFICATION FEE:
$ 768.00
DATE 9/26/2006

11. TELEPHONE (Include area code)
541-967-0123

12. FAX (Include area code)
541-967-6103

13. E-MAIL
dfloydpswres@proaxis.com

14. CROP KIND *(Common Name)*
Tall Fescue

16. FAMILY NAME *(Botanical)*
Poaceae

15. GENUS AND SPECIES NAME OF CROP
Festuca arundinacea

17. IS THE VARIETY A FIRST GENERATION HYBRID?
☐ YES ☒ NO

18. DOES THE VARIETY CONTAIN ANY TRANSGENES? *(OPTIONAL)*
☐ YES ☒ NO

IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERICALIZATION. _____

19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)

a. ☒ Exhibit A. Origin and Breeding History of the Variety
b. ☒ Exhibit B. Statement of Distinctness
c. ☒ Exhibit C. Objective Description of Variety
d. ☐ Exhibit D. Additional Description of the Variety *(Optional)*
e. ☒ Exhibit E. Statement of the Basis of the Owner's Ownership
f. ☒ Exhibit F. Declaration Regarding Deposit
g. ☒ Voucher Sample *(3,000 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)*
g. ☒ Filing and Examination Fee ($4,382), made payable to "Treasurer of the United States" *(Mail to the Plant Variety Protection Office)* ($3,652)

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? *(See Section 83(a) of the Plant Variety Protection Act)*
☐ YES *(If "yes", answer items 21 and 22 below)* ☒ NO *(If "no", go to item 23)*

21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES?
☐ YES ☒ NO

IF YES, WHICH CLASSES? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☐ YES ☒ NO

IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS.

☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

*(If additional explanation is necessary, please use the space indicated on the reverse.)*

23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?
☒ YES ☐ NO

IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. *(Please use space indicated on reverse.)*

24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT *(PLANT BREEDER'S RIGHT OR PATENT)*?
☐ YES ☒ NO

IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. *(Please use space indicated on reverse.)*

25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

| SIGNATURE OF OWNER | | SIGNATURE OF OWNER | |
|---|---|---|---|
| NAME *(Please print or type)* | | NAME *(Please print or type)* Donald J. Floyd | |
| CAPACITY OR TITLE | DATE | CAPACITY OR TITLE Director of Research | DATE 3-5-04 |

*(See reverse for instructions and information collection burden statement)*

ST-470 (02-06) designed by the Plant Variety Protection Office using Word 2003.

INSTRUCTIONS

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be **received** in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to **reproduce** the variety, or for tuber reproduced varieties verification that a viable *(in the sense that it will reproduce an entire plant)* tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for $2,705 ($320 filing fee and $2,385 examination fee), payable to "Treasurer of the United States" *(See Section 97.6 of the Regulations and Rules of Practice.)* Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfiled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of $320 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

**Plant Variety Protection Office**
**Telephone: (301) 504-5518**
**FAX: (301) 504-5291**
**Homepage:** http://www.ams.usda.gov/science/pvpo/pvp.htm

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ITEM

18a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified

18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:

(1) identify these varieties and state all differences objectively;
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.

18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.

18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, *etc.*

18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.

19. If "Yes" is specified *(seed of this variety be sold by variety name only, as a class of certified seed)*, the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. *(See Regulations and Rules of Practice, Section 97.103).*

22. *See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.*

23. *See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.*

21. CONTINUED FROM FRONT *(Please provide a statement as to the limitation and sequence of generations that may be certified.)*

22. CONTINUED FROM FRONT *(Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)*

Date of first sale: January 23, 2004 in Indiana, USA

23. CONTINUED FROM FRONT *(Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)*

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. *(See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)*

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center--East, Beltsville, MD 20705. Telephone: (301) 504-8089. http://www.ams.usda.gov/lsg/seed/ls-sd.htm



S&T-470 (04-01) designed by the Plant Variety Protection Office with WordPerfect 8.0a. Replaces STD-470 (02-99) which is obsolete.

2.

**Exhibit A**
**Origin and Breeding History**
***Blackwatch* tall fescue**

***Blackwatch*** tall fescue (*Festuca arundinacea* Schreb.) is a medium low-growing, dark green, medium-fine-leaved, turf-type tall fescue selected from the maternal progenies of 52 clones. ***Blackwatch*** was selected for intermediate density, dark-green color, leafy semi-dwarf growth habit, early maturity and above average brown patch resistance. Approximately 94% of the parental germplasm in ***Blackwatch*** contain the *Neotyphodium* endophyte.

The 52 parents of ***Blackwatch*** were selected from maternal sources evaluated in progeny turf plots at the Rutgers Plant Science Research and Extension Farm at Adelphia, NJ from the 1995, 1996, 1997 and 1998 trials. Twenty-one percent of the maternal germplasm traces to several plants selected from or related to *Apache*. Another twenty-one percent trace to a few plants selected from Athens, GA near the University of Georgia in 1977. Twelve percent traces to clones evaluated in 1988 selected from the campus of Georgia Tech in Southern GA. Another ten percent traces to plants selected from or related to *Rebel Jr.* Approximately six percent traces to a plant selected from the Princeton University campus in Princeton, NJ and used in the development of *Rebel*. Another six percent trace to plants selected from Atlanta, GA near GA Tech before 1980. Four percent traces to plants selected from or related to *Amigo*. Four percent trace to a plant designated RR-11F and evaluated in turf plots in 1988. Another four percent traces to *SR 8400*. Two percent traces to a few plants selected from or related to *Gazelle*. Another two percent traces to a few plants selected from a farm in eastern North Carolina, 1975. Another two percent traces to a few plants selected from or related to *Duke*. Another two percent trace to plants selected from or related to *Montauk* tall fescue and an additional two percent trace to plants selected from or related to *Titan* tall fescue.

All the parental germplasm of ***Blackwatch*** tall fescue traces its origin to plants selected from old turfs of the United States in a germplasm collection program initiated in 1962, to plants selected from or related to *Rebel* tall fescue (Funk et al., 1981). Attractive clones were selected from old turfs in Birmingham, AL; Athens, Atlanta, and Millegeville, GA; Preston, ID; Baltimore, MD; Bayonne, Jersey City, Elizabeth, Princeton, and Cape May, NJ; eastern North Carolina; Philadelphia, PA; Nashville, TN; Lexington, KY; Cincinnati, OH; Dallas, TX; and northern Mississippi. The tall fescue plants selected from old turfs were of unknown origin. All were large patches of turf surviving in stressful environments indicating that they had persisted and developed over a period of many years.

A few hundred attractive, turf-type plants were collected and established in spaced-plant nurseries and/or frequently mowed clonal evaluation trials at Rutgers University. All but a few dozen of the most promising plants were quickly discarded. The best selections were very different from any tall fescue variety in existence at the time of collection. They produced lower-growing turfs with finer leaves, greater density, darker color, and greater tolerance of close mowing.

The most promising plants were identified by their persistence and appearance in old turfs and their performance in spaced-plant nurseries, mowed clonal evaluation tests, and single-plant progeny trails under turf maintenance. Intercrosses of the best performing plants were subjected to varying cycles of phenotypic and genotypic selection depending on their date of collection. New sources of germplasm were added to the breeding program as it became available from the continuing collection program. Each cycle of selection showed continued progress in producing lower-growing, darker green, attractive plants with improved turf performance scores. Selection was also effective in

maintaining high seed yields, and good stress tolerance. Substantial progress was made in developing tall fescues with finer leaves, a lower growth profile, increased persistence under close mowing, and increased density.

Large numbers of single-plant progenies were seeded in turf evaluation trials at the Plant Science Research Farm at Adelphia, NJ in 1995, 1996, 1997 and 1998. The plants selected for progeny evaluation were selected from spaced-plant nurseries at Adelphia following varying cycles of phenotypic and genotypic selection of germplasm selected from old turfs and germplasm selected from or related to *Rebel* tall fescue.

Following the a period of brown patch disease in 1998, a total of 6150 tillers were selected from the best performing single-plant progeny turf plots from the 1995, 1996, 1997 and 1998 tall fescue test at Adelphia. One hundred and forty-five single-plot progenies were selected from 510 plots from 8 different populations from the 1995 test, 585 plots from 9 different populations in the 1996 test, 1055 plots from 10 different populations from the 1997 test and 635 plots from 9 different populations from the 1998 test. These plants were established in greenhouse flats prior to their transfer to two spaced-plant nurseries in the fall of 1999. Selection was based on performance records as well as appearance at the time the plants were selected from these progeny plots. Selection of plants from each progeny was based on an attractive dark green color, medium-fine leaves, abundant tillering, a more open, medium coarse canopy structure and freedom from brown patch disease. Brown patch selections were put in a separate nursery that consisted of 3900 plants, while the open, medium coarse selections were placed in another nursery that consisted of 3060 plants. In the spring of 2000, 62 plants were selected from those nurseries (21% from the brown patch selections and 79% from the open, medium course selections) for characteristics such as early maturity, dark green color, intermediate shoot density, semi-dwarf leafy growth habit and freedom from disease. The selected plants were moved prior to anthesis, to an isolated crossing block at Adelphia called 'Blackwatch'. A total of 52 plants with the best floret fertility and highest seed yield from 15 different mother lines were harvested. In the fall of 2000, one turf plot of each line was established at Adelphia. Seed from these 52 plants was also germinated in greenhouse flats and screened to approximately 60 percent for dark-green color, intermediate density and freedom from disease. The 900 plants remaining were established in an isolated spaced-plant nursery in the fall of 2000. Approximately 50 percent of these plants were rogued from the nursery for light green color, disease susceptibility, non-uniform growth habit, non-uniform maturity, poor seed yield potential and poor performance in turf plot evaluations to 429 plants. These plants were inter-pollinated and 250 plants with excellent floret fertility were harvested from this nursery. Replicated turf plots of Blackwatch were established at Adelphia in the fall of 2001 and entered in the 2001 National Tall Fescue test to be tested throughout the country. Ten pounds of breeder seed was sent to Pickseed West Inc. (PSW) for foundation and certified seed increase.

A foundation seed stock field was sown in September 2001 near Woodburn, OR. The spring time uniformity of plant type and heading date was exceptional. Certified seed production in 2003, (from a field sown with the aforementioned seed stock) was also very good. ***Blackwatch*** has been observed to be uniform and stable for 5 years and/or generations. No variants have been observed during this time nor to the present.

Diagram of Origin and Breeding History of ***Blackwatch*** Tall Fescue

1. 1962 to 1994

   Germplasm collection, evaluation, and genetic improvement.

2. 1995-1998

   Planted single-plant progenies of plants selected from current cycles of population improvement programs in closely mowed turf trials at Adelphia and North Brunswick, NJ.

3. 1999

   Selected 6150 plants from 145 of the best performing single-plant progeny turf plots planted in 1995, 1996, 1997 and 1998. Established selected plants in two spaced-plant nurseries at Adelphia, NJ.

4. 2000

   Moved 62 plants to an isolated crossing block. Harvested from 52 plants with excellent appearance and floret fertility. Established each line in turf plots at Adelphia and in an isolated spaced-plant nursery at Adelphia.

5. 2001

   Rogued approximately 50% of 900 plants to 429. These were inter-pollinated and 250 plants were harvested for excellent floret fertility and appearance at the time of harvest.

References

1. Buckner, Robert C., Jerrell B. Powell, and Rod V. Frakes. 1979. Historical Development, in Buckner, Robert C., and Lowell P. Bush (editors) Tall Fescue. Agronomy Monograph 20. American Society of Agronomy, Crop Science Society of America, Soil Science Society of America, Inc., Publishers. Madison, Wisconsin pages 1-8.

2. Funk, C.R., R.E. Engel, W.K. Dickson, and R.H. Hurley. 1981. Registration of Rebel tall fescue. Crop Sci. 21:632.

**Exhibit B**
**Varietal Distinctness**
***Blackwatch* Tall Fescue**

***Blackwatch*** is a new, distinct cultivar for turfgrass utility. Upon evaluation of morphological data generated from two growing seasons of a spaced planted cultivar trial, ***Blackwatch*** is most similar to the cultivar *Silverado*. ***Blackwatch*** can be differentiated from *Silverado* based on anthesis date. ***Blackwatch*** is 4 to 6 days earlier than *Silverado* (Table 1).

Table 1. Anthesis date of tall fescue cultivars during two growing seasons.†

| Cultivar | 2002 | 2003 |
|---|---|---|
| **Blackwatch** | **June 2** | **May 30** |
| Avenger | June 3 | May 29 |
| Bonanza | June 6 | June 2 |
| Shortstop | June 6 | June 2 |
| Silverado | June 8 | June 3 |
| Crewcut | June 8 | June 1 |
| Kentucky-31 | June 3 | May 26 |
| Wrangler | June 4 | May 30 |
| LSD@0.05 | 2 days | 2 days |

† Data condensed from a spaced planted trial of progenies from 32 tall fescue cultivars or experimental lines. The trial was established at the Pickseed West, Inc. research facility, Albany, OR in November 2001.

**U.S. DEPARTMENT OF AGRICULTURE**
**PLANT VARIETY PROTECTION OFFICE, AMS, USDA**
**NATIONAL AGRICULTURAL LIBRARY Bldg., Rm. 500**
**10301 BALTIMORE Blvd.**
**BELTSVILLE, MD 20705**

# OBJECTIVE DESCRIPTION OF VARIETY
## TALL & MEADOW FESCUES
(*Festuca* spp.)

| NAME OF APPLICANT(S) | TEMPORARY DESIGNATION | VARIETY NAME |
|---|---|---|
| **TurfOne & Rutgers, The State Univ. of New Jersey** | ***Pick OD3-01*** | ***Blackwatch*** |

ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code)
**30190 Hwy 34 SW, Albany, OR 97321**

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PVPO NUMBER
200400136

* 1. SPECIES: (With comparison varieties, use varieties within the species of the application variety)

__**1**___ 1 = *F. arundinacea* (Tall)

**Turf Types**

1 = Kentucky 31 2 = Rebel 3 = Olympic 4 = Bonanza 5 = Arid 6 = Rebel II
7 = Shortstop 8 = Silverado 9 = Rebel Jr. 10 = Mini Mustang 11 = Crewcut 12 = Bonsai
**13=Southeast** **14=Cayenne** **15=Falcon**

**Forage Types**

20 = Kentucky 31 21 = Martin 22 = Forager 23 = Mozark
24 = Kenhy 25 = AU Triumph 26 = Fawn 27 = Cajun

_____ 2 = *F. pratensis* (Meadow)

30 = Admira 31 = Beaumont 32 = Comtessa 33 = Ensign 34 = Trader

* 2. CYTOLOGY:

_____**42**_____ Chromosome Number

3. ADAPTATION: (0 = Not Tested; 1 = Not Adapted; 2 = Adapted)

__**2**___Transition Zone __**2**___West __**2**___ Northeast ___**2**__ Other (Specify):__**Pacific region**_____

* 4. MATURITY: (Date First Headed, 10% of Panicle Emergence)

___**4**_ Maturity Class 1 = Very early ( ) 2 = AU Triumph 3 = Early (Fawn) 4 = K31, Kenhy 5 = Medium (Rebel)
Medium early 6 = Bonanza 7 = Late (Silverado) 8 = 9 = Very late
Date Headed _____**May 5**_____ Location ____**Albany, OR**_____

__**5**___ Days earlier than __**4**___

Maturity same as __**1**___ Comparison Variety

__**9**___Days later than __**Southeast**___

* 5. MATURE PLANT HEIGHT CM: (Average of 100 culms from crown to top of panicle, if panicle is nodding, straighten)

* INTERNODE LENGTH CM: (First internode subtending the flag leaf)

__7__3._3_ cm Height

_1__1._1_ cm Internode length

_1__2._8_ cm shorter than _4__

__4._0_ cm shorter than _4__

Height same as _8__ Comparison Variety

Length same as _8__ Comparison variety

__ __.__ cm taller than ___

__ __.__ cm longer than ___

* HEIGHT AT EAR EMERGENCE CM: (Flag leaf height from crown to flag leaf node)

_3__1._0_ cm Height

_1__0._0_ cm shorter than __4_

Height same as _8__ Comparison Variety

__ __.__ cm taller than ___

---

* 6. GROWTH HABIT: (Mature Plants)

_7__ 1 = Prostrate ( ) 3 = Semiprostrate ( ) 5 = Horizontal ( )
7 = Semierect (Rebel) 9 = Erect (Mini Mustang)

---

* 7. RHIZOMES (Psuedo):

__ __.__ mm Length _X__1 = Absent ( ) 2 = Rare (Rebel) 3 = Common ( )

---

* 8. LEAF BLADE: (Tiller leaves/ turf color)

*_6__ Color: 1 = Light green ( ) 3 = Medium light green ( ) 5 = Green ( )
7 = Medium dark green ( ) 9 = Very dark green ( )

__5____ Specify rating of comparison variety - **Bonsai**

*_1__ Anthocyanin: 1 = Absent ( ) 9 = Present ( )

*_9__ Basal Hairs: 1 = Absent ( ) 9 = Present ( )

*_5__ Margins: 1 = Smooth ( ) 5 = Semi-rough ( ) 9 = Rough ( )

*_5__Width Class: 1 = Very coarse ( ) 3 = Coarse ( ) 5 = Medium ( )
Medium coarse 7 = Fine ( ) 9 = Very Fine ( )

* TILLER LEAF LENGTH CM: (First leaf subtending the flag leaf)

_1__4._0_ cm Tiller Leaf Length

_3._5_ cm shorter than _12__

Length same as _11__ Comparison Variety

__.__ cm longer than ___

* TILLER LEAF WIDTH MM:

_3._9_ mm Tiller Leaf Width

_1._0_ mm narrower than _1__

Width same as _4__ Comparison variety

__1.1__ mm wider than _14__

---

8. LEAF BLADE: (continued)

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FLAG LEAF LENGTH CM:

FLAG LEAF WIDTH MM:

_1_ _1_._5_ cm Flag Leaf Length

_2_._8_ mm Flag Leaf Width

_4_._4_ cm shorter than _1__

_0_._6_ mm narrower than _1__

Length same as _11__ Comparison Variety

Width same as _11__ Comparison variety

__.__ cm longer than ___

__.__ mm wider than ___

---

* 9. LEAF SHEATH: (Basal Portion)

*_9__ Anthocyanin (seedling): 1 = Absent (K31) 9 = Present ( )

*_9__ Auricle Hairiness: 1 = Absent ( ) 9 = Present ( )

---

* 10. PANICLE: (At seed maturity except where noted.)

*_5__ Shape: 1 = Narrow-tapering ( ) 5 = Ovate ( ) 7 = Oblong ( ) 9 = Other (specify)

*__5_ Type: 1 = Compact (appressed) 5 = Intermediate ( ) 7 = Open ( ) 9 = Other (specify)

*_9__ Orientation: 1 = Nodding ( ) 9 = Erect ( )

*_9__ Branch Pubescence: 1 = Glabrous ( ) 9 = Pubescent ( ) **2003 Data**

**Main**

*_6__ Anther Color (At anthesis): 1 = Yellowish Green 2 = Green 3 = Bluish Green **18% yellow-green**
4 = Purplish 5 = Reddish 6= Other (Specify) **15% green**
**6=yellow 67% yellow**

*_3__ Glume Color (At anthesis): 1 = Yellowish Green 2 = Green 3 = Bluish Green
4 = Purplish 5 = Reddish 6= Other (Specify)

*_1_ _7_._8_ cm Panicle Length (from base to tip, if nodding, straighten; after anthesis)

_2_._2_ cm shorter than _11__

Length same as _8__ Comparison Variety

__.__ cm longer than ___

---

* 11. SEED: (With Lemma & Pelea)

*_2737_ _ _ _ _ mg per 1000 seeds

__563__ mg less than _1__

Weight same as _11__ Comparison Variety

__ __ __ mg more than ___

PALEA: (Keels or Margins) ___ Hairs: 1 = Absent ( ) 5 = Short (Missouri 96) 9 = Long ( )

LEMMA: ___ Hairs: 1 = Absent (Kenhy) 5 = Several ( ) 9 = Many (Missouri 96)

__5.7__ mm Lemma Length (Mature) __15.1__ mm Lemma width **(of 10 seeds)**

__0.7__ mm shorter than _11__ __1.0__ mm narrower than _1__

Length same as _8__ Comparison Variety Width same as _14__ Comparison variety

10. PANICLE: (continued)

*AWNS: **_9__** AWNS: 1 = Absent ( ) 9 = Present (Falcon) **__100___**% Plants with awns

**__2.5__** mm Awn length (Of those present.)

**__0.7__** mm Shorter than **_8__** **2003 data**

Length same as **_15__** Comparison Variety

___.___ mm Longer than ___

12. DISEASE, INSECT, AND NEMATODE REACTION: (0= Not Tested 1= Least Resistant 9= Most Resistant)

**_0__** Melting-out *Drechslera poae*

**_0__** Leaf Spot *D. siccans*

**__0_** Net Blotch *D. dictyoides*

**_7__** Brown Patch *Rhizoctonia solani*

**__0_** C. Leaf Spot *Cercospora fectucae*

**__0_** Pink Snow Mold *Gerlachia nivalis*

**_0__** Silver Top *F. tricinctum, F. roseum*

**__0_** Blind Seed *Gloeotinia temulenta*

**_0__** Dollar Spot *Lanzia, Mollerdiscus* spp.

**__0_** Stem Rust *Puccinia graminis*

**__0_** T. Blight *Typhula incarnata*

**__0_** Pythium Blight *Pythium* spp.

**__0_** Powdery Mildew *Erysiphe graminis*

**_0__** Crown Rust *Puccinia coronata*

**__8_** Other Disease _____**Pink Patch**_____

___ Other Insect _____

___ Other Nematode _____

13. ENVIRONMENTAL STRESS

**__7_** Drought Stress 1 = Susceptible ( ) 5 = Tolerant ( ) 9 = Resistant ( )

___ Shade Stress 1 = Susceptible ( ) 5 = Tolerant ( ) 9 = Resistant ( )

**_8__** Winter Stress 1 = Susceptible ( ) 5 = Tolerant ( ) 9 = Resistant ( )

14. GIVE VARIETY OR VARIETIES THAT MOST CLOSELY RESEMBLE THE APPLICATION VARIETY. For the following characteristics, indicate the degree of resemblance with the following scale:
1 = Application variety is less than comparison variety 2 = Same as 3 = More than, better, greater, darker, etc.

| Character | VarietiesRating | Character | VarietiesRating |
|---|---|---|---|
| Leaf Width | **Bonanza 2** | Leaf Color | **Silverado 3** |
| Panicle Color | **Silverado 2** | Panicle Shape | **Wrangler 2** |
| Seed Size (length) | **Wrangler 1** | Cold Injury | **Bonsai 2** |
| Winter Color | **Bonsai 2** | Heat | **Bonsai 2** |
| Disease **(Brown patch)** | **Bonsai 2** | | |

200400136

* 15. EXPERIMENTAL: Give a brief summary of the experimental design utilized to collect the data used on this form. Cultural conditions, number of plants measured and plant spacing must be specified.

**Unless noted otherwise, data supplied for Exhibit C were generated in the 2002 season from a spaced planted nursery of individuals from 32 cultivars (or experimental lines) cultured at the research facility of Pickseed West, Inc., Albany, OR. The nursery was established in November 2001. Treatments were arranged in a randomized complete block experimental design with three replications. Each replication for an entry was represented by 20 individuals, transplanted in a single row 50 cm apart within the row. Plant nutrition followed 39.2 kgN/ha$^{-1}$ at transplanting and again in October 2002. Additionally, 100.8kgN/ha$^{-1}$ was split applied in the spring of 2002 and again in 2003. One half of the spring N was applied in March; the other half was applied in April each of the two years.**

**Scores for items in part 12 of Exhibit C were taken from the 2002 NTEP data progress report no. 03-1.**

REPRODUCE LOCALLY. Include form number and edition date on all reproductions. FORM APPROVED - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

# EXHIBIT E
# STATEMENT OF THE BASIS OF OWNERSHIP

Application is required in order to determine if a plant variety protection certificate is to be issued *(7 U.S.C. 2421)*. The information is held confidential until the certificate is issued *(7 U.S.C. 2426)*.

| 1. NAME OF APPLICANT(S) | 2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER | 3. VARIETY NAME |
|---|---|---|
| TurfOne and Rutgers, The State Univ. of New Jersey | Pick OD3-01, OD3-1 tst:8/24/04 | Blackwatch |
| **4. ADDRESS** *(Street and No., or R.F.D. No., City, State, and ZIP, and Country)* | **5. TELEPHONE** *(Include area code)* | **6. FAX** *(Include area code)* |
| 30190 Hwy 34 SW, Albany, OR 97321 | 541-967-0123 | 541-967-6103 |
| | **7. PVPO NUMBER** 200400136 | |

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain. ☐ YES ☒ NO

TurfOne jointly owns 'Blackwatch' with Rutgers, The State Univ. of New Jersey

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country. ☒ YES ☐ NO

10. Is the applicant the original owner? ☒ YES ☐ NO If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?
☐ YES ☐ NO If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?
☐ YES ☐ NO If no, give name of country

11. Additional explanation on ownership *(Trace ownership from original breeder to current owner. Use the reverse for extra space if needed)*:

**PLEASE NOTE:**

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.

2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.

3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.